

## Region 1 FY 2014 Invasive Control Program Proposal

### Willamette Valley NWRC

**Oregon White Oak Restoration: North Brown Creek Unit, William L. Finley NWR, Corvallis, OR**

**Invasive Species Project Request Total**

**\$29,500**

**Project description:** The Willamette Valley National Wildlife Refuge Complex (WVNWRC) holds some of the largest and best examples of Oregon white oak habitat remaining in the Valley. Within oak habitats, even though Douglas-fir is a commercially valuable native tree, it is considered highly invasive. Douglas-fir is encroaching and out-competing the oak such that without removal as much as half of the oak habitat on W. L. Finley NWR could be lost in the next 10-20 years.

The WVNWRC began oak restoration in the North Brown Creek Unit in 2009 under the Challenge Cost-share program, in partnership with the Marys River Watershed Council. Approximately 16 acres were treated; however more than half the smaller diameter Douglas fir trees were left standing (did not meet the specifications for stream restoration). In addition, slash cleanup and stump grinding were only completed on approximately 10 of the 16 acres.

This proposed project is to conduct oak restoration through removal of Douglas fir across the entire 70 acre North Brown Creek Unit, including all smaller diameter fir left behind from the prior restoration work. This project would be a demonstration area using a mechanized feller-buncher harvester (prior fir removal has been dominantly by hand felling) in partnership with Trout Mountain Forestry. Post-harvest site treatment would be conducted through a stewardship arrangement with Trout Mountain.

When extracted, a percentage of the larger logs will be made available for in-stream restoration projects (the Refuge has been providing fish logs to partners for restoration purposes for the past 10 years). Local watershed councils will use these logs to make significant contributions to anadromous fish, water quality, and watershed health.

**Project Objectives:** This project is supported in the WVNWRC CCP by Goal 5, Objective 5a: Maintain up to 489 acres of oak woodlands on William L. Finley NWR for oak woodland-dependent species. Under this objective Strategy 4 states; “initiate efforts to remove Douglas fir trees that are over-topping or threaten to overtop existing oaks”. The Refuge is in process of developing a forest plan/inventory to help prioritize areas most immediately threatened by conifer invasion. The current pace of fir removal on W.L. Finley NWR (cooperative projects with local watershed councils) is not fast enough to prevent significant loss of oak habitat within the next decade. The specific project objective for this proposal is “Using mechanized harvest equipment, cut and remove all Douglas fir trees in the 70 acre Brown Creek Unit that threaten or degrade the integrity of existing OR white oak habitat by Oct 2014”.

**Potential for maximum control/Likelihood of success:** On a per acre basis, this will result in complete eradication of Douglas fir on a minimum of 60 of the 70 acres within the North Brown Creek Unit (selective fir will be retained within the Brown Creek riparian zone and other exclusion sites such as a historic homestead). Control will be achieved at the end of the harvest period in 2014.

**Biological benefit to priority species or BIDEH:** This project will directly support the purposes of the WVNWRC, through the enhancement of declining habitats that specifically benefit migratory birds and other native wildlife species dependent on oak habitat. The suite of species that would benefit from this proposal includes the slender-billed nuthatch and several FWS Species of Concern (acorn woodpecker, Lewis' woodpecker, band-tail pigeon).

**Comment [BF1]:** This is good, but I would have liked to have heard more about the BIDEH value of oak woodland in and of itself. Using points from above to fill in.

**Sustainability:** The desired future condition will generally be a variable- density oak woodland, with a shrub and herbaceous understory creating ideal habitat for oak dependent species. This understory will be maintained with periodic mowing, preventing establishment of seedling fir from re-invasion. This will be accomplished on a 1-2 year interval under normal refuge operations using existing equipment.

**Monitoring:** Project success will be measured by the changes in conifer crown vegetation, with a goal of zero conifer canopy coverage in the treatment area (documented with pre and post aerial blimp photography). Passerine bird monitoring in partnership with USGS would resume in spring 2016. The WVNWRC partnered with USGS in 2010 to establish a MAPS banding station on the previously treated area of North Brown Creek.

**Comment [BF2]:** This is great. I'd like to know a little more about the structure of the bird surveys.

**Proposed Budget:** The complete project, including post-harvest treatment of slash and stumps, snag creation, and native grass/forb seeding, is projected to use a combination of funding including stewardship, partners contribution (watershed councils), invasives funding, and base refuge operations. Logs too small for off-refuge in-stream habitat projects will be utilized for wood products under a stewardship arrangement. This will cover a percentage of the costs (dependent on quantity and market value of wood products at time of removal) related to removal, post removal treatment of slash and stumps (piling and grinding), snag creation, and prep for native seeding. The Refuge will cover costs of pile burning, native seed/seeding, and future maintenance mowing.

Mechanical forestry equipment	\$22,000
In-house FWS expenditures (planning, layout, contract admin, sawyers as needed)	6,000
Aerial monitoring (post treatment monitoring 2015)	1,500

**Refuge Point of Contact:** Jock Beall, Refuge Biologist or Molly Monroe, Asst. Refuge Biologist (541)757-7236